

II. CLAIMS

1. (Currently Amended) Diagnostic procedure for identification of a disorder of a pancreas in a patient comprising determining an overall content of all known pancreatic elastases (iso-enzymes) in the patient's serum, secretions or excretions, ~~so as to thereby diagnose a disorder of the pancreas by~~ administering immuno-chemical systems using monoclonal or polyclonal antibodies, being single specific antibodies or cross-reactive antibodies that can recognize all elastase iso-enzymes but which cannot recognize the antigen with the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

2. Cancelled

3. (Currently Amended) The procedure according to claim 1, comprising obtaining antibodies by means of antigens selected from the group consisting of complete elastases 1, 2 and 3 ~~or~~ and of their sub-units wherein the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1) is not used as an elastase fragment or as an immunologically effective partial sequence thereof.

4. (Currently Amended) The procedure according to claim 3, wherein ~~the following~~ synthetic peptides are used as antigens to induce antibodies which cross-reactively recognize several elastases but which cannot recognize the antigen with the exception of the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1) and such synthetic peptides are selected from the group consisting of :

NH2-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO: 2)

NH2-Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R-COOH (SEQ ID NO: 3)

NH2-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (SEQ ID NO: 4)
NH2-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (SEQ ID NO: 5)
NH2-G-T-E-A-G-R-N-S-W-P-S-Q-I-COOH (SEQ ID NO: 6)
NH2-H-N-L-S-Q-N-D-G-T-E-Q-Y-V-COOH (SEQ ID NO: 7)
NH2-W-G-K-T-K-T-N-G-Q-L-A-COOH (SEQ ID NO: 8)
NH2-V-S-S-R-G-C-N-V-S-R-K-P-T-COOH (SEQ ID NO: 9)
NH2-G-G-E-E-A-R-P-N-S-W-P-W-Q-COOH (SEQ ID NO: 10)
NH2-S-S-S-R-T-Y-R-V-G-L-G-R-H-N-COOH (SEQ ID NO: 11)
NH2-K-D-W-N-S-N-Q-I-S-K-G-N-D-COOH (SEQ ID NO: 12)
NH2-G-P-L-N-C-Q-A-S-D-G-R-W-COOH (SEQ ID NO: 13)
NH2-G-A-L-P-D-D-L-K-Q-G-R-L-COOH (SEQ ID NO: 14)
NH2-S-L-Q-Y-E-K-S-G-S-F-Y-COOH (SEQ ID NO: 15) and
NH2-F-G-C-N-T-R-R-K-P-T-V-F-T-COOH (SEQ ID NO: 16).

5. (Currently Amended) The procedure according to claim 1, wherein the antibodies are used singly or in a combination ~~in an immuno-chemical identification system.~~

6. (Currently Amended) Immunological test kits for a diagnosis and progress check of diseases of the pancreas of a patient using stool or body fluids containing one or more of monoclonal or polyclonal antibodies, ~~which~~ where the antibodies are single specific antibodies or cross-reactive antibodies that can recognize all elastase iso-enzymes with the exception of the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

7. (Currently Amended) Procedure for obtaining monoclonal and/or polyclonal antibodies that react specifically with human elastase 1 in stool or body fluids and are induced by immunization procedures, comprising

administering peptides

A-V-K-E-G-P-E-Q-V-I-P-I-N (SEQ ID NO: 2 ~~ID NO: 1~~),
Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R (SEQ ID NO: 3 ~~ID NO: 1~~),
R-S-G-C-N-G-D-S-G-G-P-L-N (SEQ ID NO: 4 ~~ID NO: 2~~) and
G-P-L-N-C-P-T-E-D-G-G-W-Q (SEQ ID NO: 5) or immunogenic portions
of ~~such~~ these peptides to a vertebrate,
inducing the formation of antibodies, and
separating and purifying ~~such~~ the formed antibodies,
thereby obtaining monoclonal and/or polyclonal antibodies
that react specifically with human elastase 1 in stool or
body fluids.

8. (Currently Amended) The procedure according to claim 7,
comprising coupling peptides with ~~suitable~~ carrier substances
before administration to the vertebrate.

9. (Previously Presented) The procedure according to claim 7,
wherein the vertebrate is a chicken.

10. (Currently Amended) The procedure of claim 7 where the
antibodies are polyclonal ~~Polyclonal~~ antibodies, ~~produced
according to claim 7.~~

11. (Currently Amended) The procedure of claim 7 where the
antibodies are monoclonal ~~Monoclonal~~ antibodies, ~~produced
according to claim 7.~~

12. (Currently Amended) Synthetic peptide A-V-K-E-G-P-E-Q-V-I-P-
I-N (SEQ ID NO: 2.

13. (Currently Amended) Synthetic peptide Y-T-N-G-P-L-P-D-K-L-Q-
Q-A-R (SEQ ID NO: 3.

14. (Currently Amended) Synthetic peptide R-S-G-C-N-G-D-S-G-G-P-L-N (SEQ ID NO: 4).

15. (Currently Amended) Synthetic peptide G-P-L-N-C-P-T-E-D-G-G-W-Q (SEQ ID NO: 5).

16. Cancelled

17. (Currently Amended) Immunological test kits for diagnosis and progress check of diseases of a pancreas and of mucoviscidosis using stool or body fluids comprising ~~the~~ antibodies ~~of claim 1 bound to a carrier~~ induced by synthetic peptides selected from the group consisting of :

NH₂-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO: 2)

NH₂-Y-T-N-G-P-L-P-D-K-L-Q-A-R-COOH (SEQ ID NO: 3)

NH₂-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (SEQ ID NO: 4)

NH₂-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (SEQ ID NO: 5)

NH₂-G-T-E-A-G-R-N-S-W-P-S-Q-I-COOH (SEQ ID NO: 6)

NH₂-H-N-L-S-Q-N-D-G-T-E-Q-Y-V-COOH (SEQ ID NO: 7)

NH₂-W-G-K-T-K-T-N-G-Q-L-A-COOH (SEQ ID NO: 8)

NH₂-V-S-S-R-G-C-N-V-S-R-K-P-T-COOH (SEQ ID NO: 9)

NH₂-G-G-E-E-A-R-P-N-S-W-P-W-Q-COOH (SEQ ID NO: 10)

NH₂-S-S-S-R-T-Y-R-V-G-L-G-R-H-N-COOH (SEQ ID NO: 11)

NH₂-K-D-W-N-S-N-Q-I-S-K-G-N-D-COOH (SEQ ID NO: 12)

NH₂-G-P-L-N-C-Q-A-S-D-G-R-W-COOH (SEQ ID NO: 13)

NH₂-G-A-L-P-D-D-L-K-Q-G-R-L-COOH (SEQ ID NO: 14)

NH₂-S-L-Q-Y-E-K-S-G-S-F-Y-COOH (SEQ ID NO: 15) and

NH₂-F-G-C-N-T-R-R-K-P-T-V-F-T-COOH (SEQ ID NO: 16)

which antibodies are bound to a carrier and cross-reactively recognize several elastases but which cannot recognize the antigen with the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

18. (Currently Amended) Immunological test kits according to claim 17, wherein 2 different antibodies are used ~~in~~ and the test kit is a Sandwich-ELISA test kit.

19. (Currently Amended) The procedure of ~~claim 7~~ claim 8 where the immunization procedure comprises coupling peptides to hemocyanin.

20. (Currently Amended) The procedure according to claim 3 where synthetic peptides are used as antigens for ~~the~~ induction of B-cells which are fused with ~~myeloma~~ myeloma cells for generating hybridoma cells which are cultivated in cell lines producing specific monoclonal antibodies.

21. (New) The procedure of claim 17 where the antibodies are polyclonal antibodies.

22. (New) The procedure of claim 17 where the antibodies are polyclonal antibodies.